



U.S. Department of Energy
Energy Efficiency and Renewable Energy

Rebuild America Energy Technology Seminar

Key Steps to Performance Contracting

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January 20, 2005



Key Steps in Performance Contracting

- Evaluating Internal Resources
- Hiring a qualified and experienced partner
- Preparing an Action Plan
- Performing energy assessments of the facilities
 - ❖ Engineering
 - ❖ Economic Analysis
- Establishing performance guarantees
- Preparing a bid specification





Key Steps in Performance Contracting

- ➔ Project Management
- ➔ Utility Incentive Facilitation
 - Provide the M&V Protocols as required
 - Oversee the Installation of the M&V Equipment
- ➔ Commissioning



Evaluating Internal Resources

- Begin by forming a committee to oversee the energy conservation initiative
- Identify all of the facilities that will be included
- Assess the internal resources that are available to implement an energy conservation initiative
 - Engineering
 - Project Management
 - Administrative



Hiring a Qualified and Experienced Partner

- ➔ RFP for an Energy Services Company (ESCO)
 - ❖ Independent
 - ❖ Relative Project Experience and Qualifications
 - ❖ Owners Representative
 - ❖ Precluded from performing the installation of the energy conservation measures
 - ❖ Perform Energy Audits & Economic Analysis
 - ❖ Prepare Bid Specifications and Oversee the Bid Process
 - ❖ Project Management
 - ❖ Facilitate Utility Incentives



Preparing an Action Plan

- ❖ Priorities, Goals and Organization
- ❖ Candidate Buildings and Retrofit Activities
- ❖ Actions, Responsibilities, and Resources
- ❖ Monitoring, Evaluation, and Reporting
- ❖ Promotion and Expansion





Performing Energy Assessments

- ❖ Complete Building Envelop Energy Analysis to Include:
 - ❖ Load Profile
 - ❖ Energy Conservation Measures
 - ❖ Includes evaluating areas of critical need and operational savings related projects.
 - ❖ Energy reduction
 - ❖ Energy, Maintenance and Operational Savings
 - ❖ Utility Incentives
 - ❖ Cost to install



Performance Guarantees

- ❖ Measurement and Verification (M&V) Protocols
 - ❖ If M&V is required ensure the International Protocol of M&V or equal is used.
- ❖ Include in the bid specification an M&V plan or at a minimum establish parameters for an M&V Plan.
- ❖ Measured vs. Stipulated Savings
 - ❖ If stipulated savings is selected clearly indicate what assumptions are used in calculating stipulated savings and make sure you are comfortable with the assumptions.
- ❖ Performance Bond



Preparing a Bid Specification

❖ Bid Specification to Include:

- Qualification and Experience Information
- Energy Audit w/o implementation costs
- Floor plan
- Operation characteristics of the facilities

❖ Responses to the Bid should include:

- Costs to install measures
- Energy reductions and engineering calculations and assumptions
- Energy, Operational and Maintenance Cost Savings
- Financial Analysis to include a Life Cycle Cost Analysis
- Projected Utility Incentives
- M&V Plan
- Construction/Performance Bond/Guarantees & Insurance info



Project Management

- ❖ Provided by the Energy Services Company
 - ❖ Hold and chair Pre-construction Meeting (responsibilities, schedule, coordination within facility, scope, safety, security, staging, special requirements)
 - ❖ Administer Project Construction
 - ❖ Hold and Chair Ongoing Weekly Progress Meetings
 - ❖ Scheduling Updates
 - ❖ Subcontractor Management and Coordination
 - ❖ Conduct Quality Control
 - ❖ General Safety Inspections
 - ❖ Project Correspondence
 - ❖ Customer Interaction/Coordination
 - ❖ Complete Construction



Utility Incentive Facilitation

- ❖ Performed by the Energy Services Company
 - ◆ Submit all applications and forms for utility incentives
 - ◆ Submit engineering and design specifications as required
 - ◆ Conduct pre-implementation and post-implementation site visits
 - ◆ Establish and submit for approval M&V Protocols as required
 - ◆ Oversee the procurement and installation of the M&V equipment



Commissioning

- ❖ Performed by the Energy Services Company
 - Once the project has been installed by the contractor the energy services company that was retained as the owners agent should commission the installation of all energy conservation measures that were installed prior to the project receiving final approvals.